<u>Remarks</u>

Reconsideration of the application is respectfully requested in view of the foregoing amendments and following remarks. Claims 1-3, 5-16, 18-26, 28-31 and 33-48 are pending in this application. Claims 1, 12, 24, 29 and 41 are independent. No claims have been allowed. Claims 1, 12, 24, 29, 33 and 41-43 have been amended.

Cited Art

The Action relies on EP 0836354 A2 to Bales ("Bales"), U.S. Pat. No. 6,625,118 B1 to Hadi Salim et al. ("Hadi Salim"), U.S. Pat. No. 5,457,687 to Newman ("Newman") and U.S. Pat. No. 6,295,294 B1 to Odlyzko ("Odlyzko").

Section 103 Rejections

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (MPEP §2142.)

Motivations to combine or modify references must come from the references themselves or be within the body of knowledge in the art. (*See,* MPEP §2143.01.)

Patentability of claims 1-3, 5-16, 18-26, 28-31 and 33-48 under § 103(a)

The Action rejects claims 1, 5-7, 9-12, 15-16, 18-21, 24, 29, 33-34, 36-41 and 43-48 as being unpatentable under 35 USC 103(a) over Bales in view of Newman. The Action rejects claims 3, 13, 14, 25, 25, 26 and 31 under 35 USC 103(a) over Bales in view of Newman and further in view of Hadi Salim et al. The Action rejects claims 2, 22-23, 28, 42 and 43 under 35 USC 103(a) over Bales in view of Newman and further in view of Odlyzko.

Independent Claim 1

As amended, claim 1 recites the following:

A computer-implemented method comprising:
    receiving a signal indicative of an occurrence of an ECN event caused by congestion within a channel in a network communication link comprising an aggregate of a plurality of related channels connecting a source to a destination via the network communication link, wherein the signal indicating the ECN event is detectable in the source, the destination and the network; and
    based on the signal indicating the ECN event occurrence, selecting at least one channel of the aggregate of the plurality of related channels to have decreased packets transmitted therethrough for alleviating the congestion.

The Bales and Newman references fail to establish a prima facie case of obviousness because they do not teach or suggest all limitations of claim 1. Specifically, switching active transmission of data from a failed link to predetermined idle links as taught by Bales fails to teach or suggest "receiving a signal indicative of an ... congestion within a channel in a network communication link comprising an aggregate of a plurality of related channels connecting a source to a destination via the network communication link, ..., selecting at least one channel of the aggregate of the plurality of related channels to have decreased packets transmitted therethrough for alleviating the congestion. "

Bales teaches switching the active transmission of data from a failed link (e.g., PRI link 111 of FIG. 1 in Bales) to a redundant idle link (e.g., 112 or 109 of FIG. 1 of Bales) pre-determined to serve as a replacement link in the event of a failure. This does not teach or suggest detecting congestion "within a channel in a network communication link comprising an aggregate of a plurality of related channels connecting a source to a destination" and "selecting at least one channel of the aggregate of the plurality of related channels to have decreased packets transmitted therethrough for alleviating the congestion" as recited. Even assuming that Bales teaches channels within a link (*e.g., See* Bales Col. 3, Lines 10-20), switching the data transmission from a failed link to a redundant link is not the same as "selecting at least one channel of the aggregate of the plurality of related channels to have decreased packets transmitted therethrough for alleviating the congestion" wherein the selected "at least one channel of the aggregate of the plurality of related channels" is within the same "network communication link" from where the "congestion" originated. (Emphasis added)

More particularly, claim 1 recites "selecting at least one channel of the aggregate of the plurality of related channels to have decreased packets transmitted therethrough for alleviating the congestion." However, nowhere does Bales teach or suggest "selecting at least one channel of the aggregate… to have decreased packets transmitted therethrough." (Emphasis added). Instead, Bales teaches to begin, and hence increase, the transmission of data on a previously idle communication link (e.g., 112 or 109 of FIG. 1 of Bales).

Furthermore, nothing in Bales teaches or suggests "selecting at least one channel of the aggregate of the plurality of related channels to have decreased packets transmitted therethrough for alleviating the congestion." (Emphasis added) In fact, even redundant "PRI links" (e.g., 112 or 109 of FIG. 1) of Bales, on which transmission is increased (not "decreased" as claimed) are pre-determined to assume transmission of data from a failed "PRI link" and hence, not selected. See "primary" and "secondary" replacement links "109" and "112" respectively of Bales at Col. 3, Lns. 20-23. Also, even if the failed links, as a result of the failure, are read to have "decreased" transmission, they are not identified by any "selecting" step as recited since which link fails is a matter of happenstance not selection. Thus, such methods involving pre-determination or happenstance is not the same as "selecting," and more particularly, they fail to teach or suggest responding to dynamics of the network traffic by "based on the signal indicating the ECN event occurrence, selecting at least one channel of the aggregate of the plurality of related channels to have decreased packets transmitted therethrough for alleviating the congestion" as recited.

One embodiment of claim 1 is illustrated in the following example described in the specification at Pg. 15, Lns. 12-20.

> Thus, if ECN is generated on channel 302, indicating that this channel is congested (perhaps, for example, as a result of the high bandwidth required by video data), then the policy mechanism – not shown in FIG. 3 – must determine which of the channels 302, 304, and 306 are to have reduced packet transmission on in order to decrease network congestion. For example, based on the criteria used by the mechanism, the decision may be made to decrease the video data throughput itself (since this would cause only a degradation in the quality of the video data, and not a complete loss of the signal), or decrease the audio data throughput, or the mouse data throughput – even though the latter two did not contribute to the network congestion. (Emphasis added).

The step of "selecting at least one channel of the aggregate of the plurality of related channels to have decreased packets transmitted therethrough for alleviating the congestion" is

different from what is taught by Bales, because the recited step allows for any one of the related channels to be selected "to have decreased packets transmitted therethrough for alleviating the congestion" in any of the other related channels. Thus, as recited, a channel other than the source of congestion can be selected "to have decreased packets transmitted therethrough for alleviating the congestion" in another channel.

Newman also does not teach or suggest the claim limitation of "receiving a signal indicative of an ... congestion within a channel in a network communication link comprising an aggregate of a plurality of related channels connecting a source to a destination via the network communication link, ..., selecting at least one channel of the aggregate of the plurality of related channels to have decreased packets transmitted therethrough for alleviating the congestion. " Newman describes a "virtual channel" which is similar to the "PRI link" described by Bales, because the virtual channel in Newman connects a source and destination by "forming a chain of nodes in the network". *See,* Newman, Col. 7, Lns. 57-60; Col. 8, Lns. 12-13; FIG. 1; FIG. 2. Therefore, Newman does not teach or suggest "a channel in a network communication link comprising an aggregate of a plurality of related channels connecting a source to a destination via the network communication link" as recited by claim 1.

Also, nothing Newman teaches or suggests "selecting at least one channel of the aggregate of the plurality of related channels to have decreased packets transmitted therethrough for alleviating the congestion." In fact, Newman states "when congestion is detected at a node, the node sends a choke packet back to the source identifying the destination having the congestion. When a source receives a choke packet, the sources reduces by some factor the traffic sent to the destination." *See* Newman, Col. 5, Lns. 30-34. Thus, according to Newman there is no need for the "selecting" step as recited, since congestion is always addressed by reducing transmission at the source of the congestion.

Because the references relied on, individually or in combination, fail to describe at least one claim limitation of claim 1, Applicants believe that claim 1 as amended is not subject to a §103(a) rejection and request that the rejection be withdrawn. Thus, claim 1 should be allowable over the cited art.

Independent Claim 12

As amended, claim 12 recites the following:

> A computerized system comprising:
> a network layer having a network communications link comprising an aggregate of a plurality of related channels therethrough, and triggering an ECN event in response to congestion within one of the aggregate of related plurality of channels during transmission of a packet from a source having a source protocol layer to a destination having a destination protocol layer, wherein the triggered ECN event is detectable at the source, and the destination; and,
> a policy mechanism to select at least one channel of the aggregate of related plurality of channels other than the congested channel to have decreased transmission of packets therethrough based on the ECN event for alleviating the congestion.

For the reasons set forth above with reference to claim 1, the Bales and Newman references, individually or in combination, fail to establish a *prima facie* case of obviousness, because they do not teach or suggest all limitations of claim 12. Specifically, Bales and Newman do not suggest or teach "a network layer having a network communications link comprising an aggregate of a plurality of related channels therethrough and triggering an ECN event in response to congestion within one of the aggregate of related plurality of channels." Also, for the reasons set forth above with reference to claim 1, Bales and Newman do not teach or suggest "a policy mechanism to select at least one channel of the aggregate of related plurality of channels other than the congested channel to have decreased transmission of packets therethrough based on the ECN event for alleviating the congestion." Additionally, claim 12 specifically points out that congestion is alleviated by selecting "at least one channel of the aggregate of related plurality of channels <u>other than the congested channel</u> to have decreased transmission of packets therethrough." (Emphasis added) Notwithstanding the distinction between the recited "a plurality of related channels" in a single link as opposed to individual links themselves, neither Bales nor Newman teaches or suggests "a policy mechanism <u>to select at least one channel</u> of the aggregate of related plurality of channels <u>other than the congested channel</u> to have decreased transmission of packets therethrough."

Because the cited references, individually or in combination, fail to describe at least one claim limitation of claim 12, Applicants believe that claim 12 as amended is not subject to a

§103(a) rejection and request that the rejection be withdrawn. Thus, claim 12 should be allowable over the cited art.

Independent Claim 24

As amended, claim 24 recites the following:

> A computer comprising:
> a processor;
> a computer-readable medium;
> a protocol layer having a network communications link comprising an aggregate of related plurality of channels connecting a source to a destination via the network communications link, the aggregate of related plurality of channels including a congested channel; and
> a congestion policy program executed by the processor from the medium, wherein the congestion policy program is responsive to an ECN event triggered within the congested channel due to a congestion during transmission of packets from the source to the destination and wherein the ECN event is detectable within the source and the destination for selecting at least one channel of the aggregate of related channels other than the congested channel to have decreased transmission of packets therethrough based on the ECN event triggered within the congested channel to alleviate the congestion.

For the reasons set forth above with reference to claim 1, the Bales and Newman references, individually or in combination, fail to establish a *prima facie* case of obviousness, because they do not teach or suggest all limitations of claim 24. Specifically, Bales and Newman do not suggest or teach "a protocol layer having a network communications link comprising an aggregate of related plurality of channels." Also, for the reasons set forth above with reference to claims 1 and 12, Bales and Newman do not suggest or teach "selecting at least one channel of the aggregate of related channels other than the congested channel to have decreased transmission of packets therethrough based on the ECN event triggered within the congested channel to alleviate the congestion."

Because the cited references, individually or in combination, fail to describe at least one claim limitation of claim 24, Applicants believe that claim 24 as amended is not subject to a §103(a) rejection and request that the rejection be withdrawn. Thus, claim 24 should be allowable over the cited art.

Independent Claim 29

As amended, claim 29 recites the following:

A machine-readable medium having processor instructions stored thereon for execution by a processor, the medium causing performance of a method comprising:
        receiving feedback of an ECN event triggered due to a congestion occurrence in one of an aggregate of related plurality of channels within a network communications link connecting a source protocol layer to a destination protocol layer, wherein the feedback is detectable at the source and the destination; and
        selecting at least one channel of the aggregate of related plurality of channels to have decreased packets transmitted therethrough, based on the ECN event for alleviating the congestion.

For the reasons set forth above with reference to claim 1, the Bales and Newman references, individually or in combination, fail to establish a *prima facie* case of obviousness, because they do not teach or suggest all limitations of claim 29. Specifically, Bales and Newman do not suggest or teach "an aggregate of related plurality of channels within a network communications link connecting a source protocol layer to a destination protocol layer." Also, for the reasons set forth above with reference to claim 1, Bales and Newman do not suggest or teach "selecting at least one channel of the aggregate of related plurality of channels to have decreased packets transmitted therethrough, based on the ECN event for alleviating the congestion."

Because the cited references, individually or in combination, fail to describe at least one claim limitation of claim 29, Applicants believe that claim 29 as amended is not subject to a §103(a) rejection and request that the rejection be withdrawn. Thus, claim 29 should be allowable over the cited art.

Independent Claim 41

As amended, claim 41 recites the following:

A computer comprising:
        a source protocol layer;
        a plurality of filters;
        a network communication link comprising an aggregate of related plurality of channels connecting a source protocol layer to a destination protocol layer in a network layer, each channel of the plurality of related channels associated with a filter; and

a policy mechanism responsive to an ECN event triggered due to a congestion during transmission of packets from the source protocol layer to the destination protocol layer via the network layer, wherein the ECN event is detectable within the source protocol layer and the destination protocol layer for selecting, based on the ECN event, at least one channel of the aggregate of related plurality of channels to have decreased packets transmitted therethrough from the source protocol layer through the plurality of filters to alleviate the congestion.

For the reasons set forth above with reference to claim 1, the Bales and Newman references, individually or in combination, fail to establish a *prima facie* case of obviousness because they do not teach or suggest all limitations of claim 41. Specifically, Bales and Newman do not suggest or teach "a network communication link comprising an aggregate of related plurality of channels connecting a source protocol layer to a destination protocol layer in a network layer." Also, for the reasons set forth above with reference to claim 1, Bales and Newman do not suggest or teach "selecting, based on the ECN event, at least one channel of the aggregate of related plurality of channels to have decreased packets transmitted therethrough...to alleviate the congestion."

Because the cited references, individually or in combination, fail to describe at least one claim limitation of claim 41, Applicants believe that claim 41 as amended is not subject to a §103(a) rejection and request that the rejection be withdrawn. Thus, claim 41 should be allowable over the cited art.

Claims 2-3, 5-11, 13-16, 18-26, 28- 31 and 33-48

Claims 2-3, 5-11 and 44 ultimately depend on claim 1, claims 13-16, 18-23 and 45 ultimately depend on claim 12, claims 25-26, 28 and 46 ultimately depend on claim 24, claims 30-31, 33-40 and 47 ultimately depend on claim 29 and claims 42-43 and 48 ultimately depend on claim 41. Thus, at least for the reasons set forth above with regard to claims 1, 12, 24, 29 and 41, claims 2-3, 5-11, 13-16, 18-26, 28- 31 and 33-48 should be in condition for allowance.
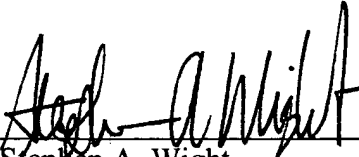
Conclusion

The claims in their present form should now be allowable. Such action is respectfully requested.

Respectfully submitted,

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By   _(signature)_

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